

REMARKS

The Applicant appreciates the Examiner's careful examination of this case.

Reconsideration and re-examination are respectfully requested in view of the instant remarks.

With regard to the section marked "Application Papers" on page 1 of the Office Action, the Applicant was much obliged to the Examiner for accepting the drawings.

With regard to paragraphs 1, 2 and 3 on pages 2 and 3 of the Office Action, the Examiner has rejected claims 16 - 21 as being anticipated by Gyory (US 4,172,696). Gyory has previously been discussed in depth by the Applicant.

In paragraph 2 of the present Office Action, the Examiner maintains that Gyory discloses a tube 28 connected to the valve plate 18. The Applicant maintains that this is factually not correct. Gyory describes the part 28 as a suction plenum 28, see Col. 2 line 27 of Gyory, i.e. a suction chamber. Thus Gyory discloses a suction chamber 28 and not a tube 28. Moreover, the applicant's claimed tube "contains a column of fluid to provide substantial mechanical damping of the motion of the reed". The claimed tube containing a column of fluid is within the suction side 12. See e.g. applicant's Fig. 1.

In contrast, Gyory simply discloses a suction plenum 28, and there is clearly no tube, nor is there a column of fluid within the tube, separate and apart from the suction plenum 28. The suction plenum of Gyory is simply a space, and if it compares to the applicant's claimed invention at all, it may compare only to the suction side 12 (see e.g. applicant's Fig. 1), without a tube or a column of fluid therein.

Not only is the applicant's claimed structure missing from the teachings of Gyory, but the claimed function is also missing. The applicant's claimed tube and column of fluid "provide

substantial damping of the reed". This is to prevent unnecessary bending stresses on the reed which could damage the reed. See e.g. the applicant's specification.

Instead of adding a structure, namely a tube containing a column of fluid to provide mechanical damping of the motion of the reed, Gyory discloses changing the structure of the reed itself. Gyory discloses that the suction or discharge reed valve 40 contains openings 50 to counter working stresses. See e.g. Gyory column 2, lines 7-9, lines 39-50, and column 1, lines 62-65.

It is clear, therefore, that Gyory fails to disclose either the applicant's claimed structure or its function, and in fact teaches something much different. If the Examiner maintains the position that Gyory discloses a tube 28, then the Applicant would be most grateful to the Examiner for a detailed explanation of how Gyory discloses a tube 28 when the Gyory description says that the part 28 is suction chamber and the Gyory drawings show a suction chamber. The Gyory suction chamber 28 extends all around the Gyory central part having the reference Nos. 34, 36, 30. A tube in the normally accepted sense of the word could not have the construction of the Gyory suction chamber 28.

Also in paragraph 2 of the present Office Action, the Examiner says that a suction chamber is considered inherent to the valve assembly of Gyory, and is regarded as the chamber in which the tube 28 is disposed. The Applicant respectfully points out that Gyory only discloses one thing and this is a suction chamber 2B. Gyory does not disclose a tube 28, and Gyory does not disclose a tube 28 which is in a suction chamber 28. All Gyory discloses is a suction chamber 28. It is respectfully submitted that the Examiner is reading more into Gyory than is actually disclosed. It is also respectfully submitted that the same Gyory element 28 is not two separate parts. The Gyory single element 28 is not firstly a tube 28, and a suction chamber 28 in which

the tube 28 is placed. Such an expansive view of the Gyory disclosure is not suggested by Gyory.

In summary, since Gyory does not disclose a tube 28, then Gyory does not disclose and does not teach using a tube such as the Applicant's tube 17 to receive a column of fluid to effect substantially dampening of the reed 40. We believe that the Examiner must agree that Gyory teaches different structure and function than the Applicant's claimed invention.

In paragraph 4 of the Office Action, the Examiner has rejected claims 16 - 28 as unpatentable over Gyory in view of JP 10-213077 or Becker et al (US 5,275,541). These combinations suggested by the Examiner do not arrive at the Applicant's claim 16 because Gyory does not disclose the applicant's claimed elements discussed above. Additionally, both JP 10-213077 and Becker et al have previously been discussed in detail with the Examiner.

As stated in a previous Response, JP 10-213077 has a reed valve 5 covering a suction hole 2, but the suction hole 2 is in what is called a check valve unit. It is not stated that this check valve unit is a valve plate. Even if the check valve unit were to be a valve plate, then the reed valve 5 is not positioned on a part of the check valve unit 4 which closes a cylinder of a piston and cylinder arrangement. In JP 10-213077, the part 1 is referred to as a casing. Thus the suction pipe 8 simply extends to the environment outside the casing 1. The suction pipe 8 will thus contain only air from the environment. There will be no damping of reed valve 5. JP 10-213077 simply discloses a check valve arrangement for use in a non-illustrated diaphragm-type pump. JP 10-213077 does not disclose or contemplate the use of damper means for mechanically damping motion of a reed valve.

Figure 1 of Becker et al shows that Becker et al has a construction which is completely different than the Applicant's construction. The Becker et al inlet suction reed valve 25 closes a port 21 on a part 6. The part 6 is not a valve plate and it appears to be a cylinder head. The

Becker et al reed valve 25 is not positioned on the side of the Becker et al part 6 which closes the Becker et al cylinder 12. It is the Becker et al part 4 which closes the cylinder, and this part 4 does not have a reed valve for the port 23. If the Examiner regards the Becker et al part 4 as being a valve plate, then the Becker et al reed 25 is on a side of the valve plate 4 which is the opposite to what is stated in the Applicant's claim 16. In the Applicant's claim 16, it is stated that the reed is positioned on a side of the valve plate which closes a cylinder of a piston and cylinder arrangement whereby the reed flexes into the cylinder when the reed opens the port. There is absolutely no question of this happening in the Becker et al construction, if the Becker et al part 4 is to be regarded as a valve plate.

At the top of page 5 of the Office Action, the Examiner says that in both JP 10-213077 and Becker et al, the reed in the suction valve opens into the cylinder space. The Applicant respectfully disagrees. More specifically, this is clearly not the case in Becker et al where the reed 25 extends into an annular compartment 11 which is in a part 4, closing the Becker et al cylinder.

In the Applicant's submission, JP 10-213077 and Becker et al show constructions which are nothing like the Applicant's construction as claimed in the Applicant's claim 16. In addition, none of JP 10-213077, Becker et al and Gyory is directed towards the Applicant's problem of reed valve dampening. It is respectfully submitted that the three cited patents do not at all disclose or teach the elements covered by the Applicant's claim 16.

In the paragraph on page 6 entitled "Response to Arguments" the Examiner says that the Applicant's arguments with regard to JP 10-213077 are unpersuasive in that the tube 8 necessarily receives a column of fluid prior to its passage through the port 2 and the suction valve disposed thereacross. The Examiner also says that the limitation of "whereby the reed

closes faster than without dampening, and whereby the refrigerant fluid flows into the inlet side of the valve plate with a smoother flow than without the dampening and thereby reduces noise generated" is functional in nature and that the arrangements in both JP 10-213077 and Becker et al are necessarily capable of meeting this limitation as in each case the oscillatory motion of the reed is subject to damping by a column of liquid above the reed. It is respectfully pointed out above that the Examiner's understanding of JP 10-213077 and Backer et al is not correct. Also, JP 10-213077 and Becker et al are not capable of achieving the above stated limitation. Thus whilst the limitation is functional in nature, it is nevertheless a limitation because it is something which has to be achieved by the Applicant's claim 16, and which cannot be achieved by JP 10-213077 and also Becker et al. Also, it should not be overlooked that JP 10-213077 and Becker et al are simply just not directed at the Applicant's problem of reed valve dampening.

Each of the Examiner's rejections has been addressed or traversed. Accordingly, it is respectfully submitted that the application is in condition for allowance. Early and favorable action is respectfully requested.

If for any reason this Preliminary Amendment including Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned or his associates, collect in Waltham, Massachusetts at (781) 890-5678.

Respectfully submitted,



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